May, 2006

Express
Ethernet Switch
LB8423A-US

CUSTOMER
SUPPORT
INFORMATION

Order toll-free in the U.S. Call : **877-877-BBOX (Outside U. S. call 724-746-5500)**
FREE technical support 24 hours a day, 7 days a week: Call **724-746-5500** or fax **724-746-0746**
Mailing address: **Black Box Corporation**, 1000 Park Drive, Lawrence, PA 15055-1018
Web site: **www.blackbox.com** • E-mail: **info@blackbox.com**

FEDERAL COMMUNICATIONS COMMISSION AND
CANADIAN DEPARTMENT OF COMMUNICATIONS
RADIO FREQUENCY INTERFERENCE STATEMENT

Class B Digital Device. This equipment has been tested and found to comply with the limits for a Class B computing device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. This equipment generates, uses, and can radiate radio frequency energy, and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. If this equipment does cause harmful interference to radio or telephone reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult an experienced radio/TV technician for help.

Caution:
Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

To meet FCC requirements, shielded cables and power cords are required to connect this device to a personal computer or other Class B certified device.

This digital apparatus does not exceed the Class B limits for radio noise emission from digital apparatus set out in the Radio Interference Regulation of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe B prescrites dans le Règlement sur le brouillage radioélectrique publié par le ministère des Communications du Canada.

Normas Oficiales Mexicanas (NOM)
INSTRUCCIONES DE SEGURIDAD

1. Todas las instrucciones de seguridad y operación deberán ser leídas antes de que el aparato eléctrico sea operado.
2. Las instrucciones de seguridad y operación deberán ser guardadas para referencia futura.
3. Todas las advertencias en el aparato eléctrico y en sus instrucciones de operación deben ser respetadas.

4. Todas las instrucciones de operación y uso deben ser seguidas.

5. El aparato eléctrico no deberá ser usado cerca del agua—por ejemplo, cerca de la tina de baño, lavabo, sótano mojado o cerca de una alberca, etc.

6. El aparato eléctrico debe ser usado únicamente con carritos o pedestales que sean recomendados por el fabricante.

7. El aparato eléctrico debe ser montado a la pared o al techo sólo como sea recomendado por el fabricante.

8. Servicio—El usuario no debe intentar dar servicio al equipo eléctrico más allá a lo descrito en las instrucciones de operación. Todo otro servicio deberá ser referido a personal de servicio calificado.

9. El aparato eléctrico debe ser situado de tal manera que su posición no interfiera su uso. La colocación del aparato eléctrico sobre una cama, sofá, alfombra o superficie similar puede bloquea la ventilación, no se debe colocar en libreros o gabinetes que impidan el flujo de aire por los orificios de ventilación.

10. El equipo eléctrico deber ser situado fuera del alcance de fuentes de calor como radiadores, registros de calor, estufas u otros aparatos (incluyendo amplificadores) que producen calor.

11. El aparato eléctrico deberá ser connectado a una fuente de poder sólo del tipo descrito en el instructivo de operación, o como se indique en el aparato.

12. Precaución debe ser tomada de tal manera que la tierra fisica y la polarización del equipo no sea eliminada.

13. Los cables de la fuente de poder deben ser guiados de tal manera que no sean pisados ni pellizcados por objetos colocados sobre o contra ellos, poniendo particular atención a los contactos y receptáculos donde salen del aparato.

14. El equipo eléctrico debe ser limpiado únicamente de acuerdo a las recomendaciones del fabricante.

15. En caso de existir, una antena externa deberá ser localizada lejos de las lineas de energia.

16. El cable de corriente deberá ser desconectado del cuando el equipo no sea usado por un largo periodo de tiempo.

17. Cuidado debe ser tomado de tal manera que objectos liquidos no sean derramados sobre la cubierta u orificios de ventilación.

18. Servicio por personal calificado deberá ser provisto cuando:

    A: El cable de poder o el contacto ha sido dañado; u

    B: Objectos han caído o líquido ha sido derramado dentro del aparato; o

C: El aparato ha sido expuesto a la lluvia; o

D: El aparato parece no operar normalmente o muestra un cambio en su desempeño; o

E: El aparato ha sido tirado o su cubierta ha sido dañada.

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About This Manual

This manual describes the Black Box Express Ethernet Switch in these basic sections:

- FCC Statement
- Introduction
- Product Features
- Installation

Packing List

Please inspect the contents and report any apparent damage or missing items immediately to Black Box.

- The switch
- User's Manual
- External AC to DC power Linear Power Supply

Introduction

LB8423A-US is an 8-port Fast Ethernet switch, integrating 10/100BaseTX networks in a cost-effective desktop package. The TX ports are auto MDIX and capable of auto negotiate speed and half/full duplex modes.

Product Features

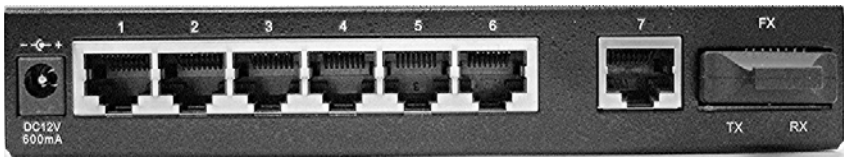
- 7-port 10/100BaseTX. & 1-port 100Base FX
- Equipped with US Linear Power Supply (110VAC, 12V, 0.6A)
- Auto MDIX on all TX ports to eliminate the need for crossed over cable
- TX ports are capable of auto negotiate 10/100Mbps speed & full/half duplex mode
- Broadcast storming filter function.
- True non-blocking architecture.
- Full wire-speed forwarding rate.
- Store-and-forward mechanism.
- Back pressure and IEEE802.3x compliant flow control.
- Supports 2K MAC addresses.
- Supports 1M bits buffer memory.
- Front panel power and port status LEDs.
- Wall-mountable pocket size.

Front & Back Panel

LB8423A-US is a space saving pocket size 8-port TX/FX Ethernet switch designed for wall-mount or desktop. LED indicators and TX/FX ports are located on front and back panels respectively. Back panel is equipped with seven TX ports, one FX port, and a DC receptacle. The front panel displays arrays of LEDs indicating power & individual port activity.

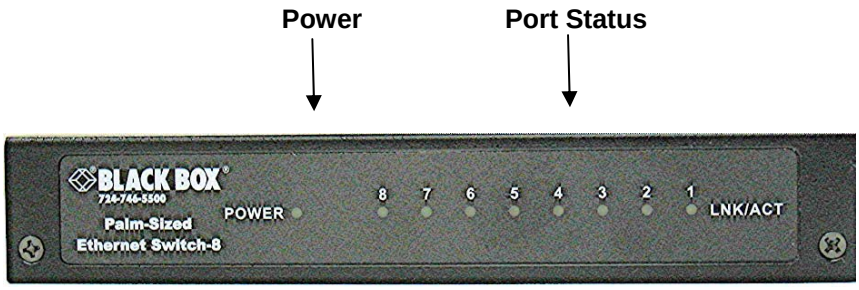
Back Panel

Power Receptacle: Connect the supplied universal power adaptor to the receptacle on back panel and then plug the cord into standard AC outlet with a voltage range from 100 to 240



Fiber Port

Front Panel



LEDs

LED indicators on the front panel convey status information to help you monitor and troubleshoot the switch.

Power

This LED comes on when the switch is connected to the power adapter.

Port Status

Each port has a matching LED showing the port status. When port LED is on, it indicates the corresponding port is connected with another switch/hub or computer. When port LED blinks, it indicates exchanging data or packets within the network is proceeding.

The table below provides detailed information on LEDs.

LED	State	Indication
LNK/ACT	Steady	The port has established a valid network connection. LNK stands for LINK.
	Flashing	The port is transmitting or receiving data. ACT stands for ACTIVITY.

Installation

Selecting a Site for the Switch

As with any electronic device, you should place the switch where it will not be subject to extreme temperatures, humidity, or electromagnetic interference. Specifically, the site you select should meet the following requirements:

- The ambient temperature should be between 32 and 104 degrees Fahrenheit (0 to 40 degrees Celsius).
- The relative humidity should be less than 90 percent, non-condensing.
- Surrounding electrical devices should not exceed the electromagnetic field (RFC) standards for IEC 801-3, Level 2 (3V/M) field strength.
- Make sure that the switch receives adequate ventilation. Do not block the ventilation holes on the side of the switch or the fan exhaust port on the rear of the switch.
- The power outlet should be within 1.8meter (6 feet) of the switch.

Connecting to Your Network

Connect network cables from computers or network segments to the TX ports on the back panel.

Table 2: Cabling Information

Speed	**Connector**	**Port Speed Half/Full Duplex**	**Cable**
100BaseTX	RJ-45	100/200 Mbps	100 m, Category 5 STP/UTP
10BaseT	RJ-45	10/20 Mbps	100 m, Category 3, 4, or 5 STP/UTP
100BaseFX Multi-mode	SC, ST, MT-RJ, VF-45, or LC	100/200 Mbps	Up to 2km, 50 or 62.5/125µm Multi-mode fiber cable
100BaseFX Single-mode	SC	100/200 Mbps	Up to 75km, 9 or 10/125µm Single-mode fiber cable

Specifications

Applicable Standards	IEEE 802.3, 10BaseT, IEEE 802.3u, 100BaseTX/FX
LED Indicators	Per unit – Power Status Per Port – LNK/ACT
Cable	10BaseT 2-pair UTP/STP Cat. 3,4,5, up to 100m 100BaseTX 2-pair UTP/STP Cat.5, up to 100m 100BaseFX 50 or 62.5/125µm Multi-mode fiber optic cable, up to 2km 100BaseFX 9 or 10/125µm Single-mode fiber optic cable, up to 75km
Switching Methods	Store-and-Forward
Forwarding Rate	14,880pps for 10Mbps, 148,800pps for 100Mbps
AC Input	110VAC, 50-60Hz, external linear power supply
Power consumption	110VAC, 12V, 0.6A
Operating Temperature	0°C~40°C (32°F~104°F)
Storage Temperature	-25°C~70°C (-13F°~158°F)
Humidity	10%~90%, non-condensing
Emissions	FCC part 15 Class B, CE Mark-B,
Dimensions	W160 x D81 x H28mm palm size
Weight	0.42kg (0.92lb.)